II Sysops

A bi-monthly newsletter for, and by, Apple II sysops
Issue 6 May/June 1992

Board-by-Board News

What's happening on bulletin boards around the world

ProLine 2.0 released.

By the time you read this, Morgan Davis Group is scheduled to release ProLine 2.0, a major update for the 8-year old BBS software. During development of 2.0, says Morgan Davis, "we fixed an eye on the user, making the system easier, quicker, and as a result, more enjoyable." Upgrades for registered sysops are $50. Also released: ModemWorks 3.0 ($89.95, $30 upgrade), ModemWorks Lite 3.0 ($39.95, $15 upgrade), ModemWorks Technical Reference ($14.95), Object Module Manager 1.3 ($39.95, $20 upgrade), ProLine Reference Manual ($19.95), VirusMD 2.1 ($19.95, $10 upgrade), and the MD-BASIC 1.5 Interface Update ($5.95). A complete review of ProLine 2.0 will appear in a future issue of *II Sysops*.

LLUCE nears completion.

Effective June 1, 1992, GBBS sysops will reach a multi-line system called "The Daily Planet BBS" when calling the L&L Support BBS phone number. This IBM system will have a seperate section devoted to GBBS Support.

Also, L&L Productions is **now** taking orders for LLUCE, the long-awaited "sequel" to GBBS Pro. Lance Taylor-Warren has promised to release LLUCE by September 1, 1992 or return all payments. Upgrades from any version of GBBS to LLUCE are $50. Upgrades from any non-GBBS BBS software (Apple II or otherwise) are $75. Purchases of LLUCE (without using an upgrade path) are $125. Call the **L&L Productions BBS** for more information.

Early version of Eclipse released.

Andrew Roughan has released a beta version of Eclipse, a new freeware BBS program, to those who have expressed interest in it. Eclipse is basically a versatile progamming language designed to facilitate running a BBS. A sample set of BBS programs is included, but the author strongly encourages sysops to write their own systems

Electronic mall for ProLine systems.

Nelson Alfonso (nelson@pro-miami.cts.com) has released Vendor's On-Line, a $15 shareware add-on to ProLine which allows the sysop to set up an online mall where businesses can sell their products, much the same way Comp-U-Store and the GEnie mall work. Users can browse through a listing of products, and then make purchases, paying by credit card or personal check (the vendor must process credit card orders himself - VOL only records the information).

ANSITerm 1.1 released.

Parkhurst Micro Products has released ANSI Term version 1.1. New features include full 16-color ANSI support.

Comp.sys.apple2 reaches readership high.

According to a recent ranking of Usenet newsgroups, 41,000 people worldwide read comp.sys.apple2, more than ever before. The news group ranks 10th out of over 1000 newsgroups in terms of volume. Who says the Apple II is dead?

System 6.0 has been released.

For those of you who don't already know, System 6.0 has been released by Apple Computer. It (along with ProDOS 2.0.1) is available from a number of sources, including The II Sysops BBS at (410) 549-2584. Apart from some applications having compatibility problems with CloseView and EasyAccess (both included in 6.0), the release seems to be fairly stable. RamFAST owners need to turn off RamFAST's remapping of slots or, better yet, get the RamFAST ROM upgrade.

Please see NEWS, page 3.

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To Our Readers:

We've changed the format of *II Sysops* slightly with this issue, as you may have noticed. The front page is now devoted entirely to Board-To-Board news (which even spills over to page three); the "In The Issue" section has been moved to page two. We've scrapped the full page "subscribe" ad which used to occupy page two, and replaced it with this "Letter From The Editor" and a listing of the people who work to put *II Sysops* together. We're also using smaller print (again) so that we can fit more information in the newsletter.

You may have also noticed, starting with the last issue, that we're now punching holes in the newsletter to make it easy for you to store *II Sysops* in a three-ring binder. I guess you could say we're now using holey paper!

For our international subscribers, we've adjusted subscription rates to more accurately reflect our actual international postage costs. I think you'll like the new rates!

We've made all of these changes to give our subscribers a better value for their money. Now, more than ever, *II Sysops* is a great deal.

And it will keep getting better. We're planning a special twelve-page issue for July/August. We'll be handing out copies of it at the Apple Central Expo in Kansas City.

Our BBS keeps getting better too. It's absolutely free, and it provides the latest in information and files of interest to Apple II sysops. Shareware and freeware BBS programs, System 6.0, comp.sys.apple2, pro.appletech, Internet access, and more

II Sysops has been an incredible learning experience for me and my partner Jim. We've come a long way in our first year, and things keep looking better. With any luck, *II Sysops* will be around for a long time. We couldn't have done it without our subscribers -- thanks everyone!

See you in Kansas City...

--Doug Granzow

II Sysops subscription rates

Issues:				12	18
US	$2.50	6.00	10.00	18.00	25.00
Can./Mex.	2.70	6.50	11.00	19.75	27.00
Elsewhere	3.10	7.50	13.00	24.00	33.00

Board-by-Board News

More of what's happening on Apple II BBS's and throughout the Apple II world.

Apple Central Expo.

Events Specialists will be hosting the 2nd Annual Apple Central Expo in Kansas City, Missouri July 25 and July 26.' The Expo immediately follows "Kansasfest," the 4th Annual A2-Central Summer Conference. Tickets to the Expo are $15. Companies exhibiting include Apple Computer, Procyon, Roger Wagner, Incider/A+, Nibble, TMS, Quality Computers, and ***II Sysops***. For tickets or for more information, call Events Specialists at 1-800-955-6630.

Andy Nicholas gets new job.

Andy Nicholas, System 6 IIgs Finder Engineer, has joined a team of engineers working on the Macintosh Finder. Not to worry, though, he is still updating ShrinkIt and he definately still keeps in touch with Apple II users through comp.sys.apple2 and other online services.

Beagle Bros leaves the II world.

Beagle Bros has joined the expanding list of former II-only software companies to drop the Apple II and go on to other platforms. Beagle Bros has sold their line of II software to Quality Computers, which will continue to sell and maintain the software. It is unclear at this point what this means for the network of "Beagle Buddies" who are active in Apple II User Groups.

1991 Apple II Acheivement Awards announced.

Despite some controversy, Matt Deatherage announced, on April 3, the winners of the 1991 Apple II achievement awards. The winners are:

Best Freeware/Shareware:
ShrinkIt GS v1.04 (Andy Nicholas)
Best Educational Software:
HyperStudio 3.0 (Roger Wagner Publishing)
Best 8-Bit Application:
ProTERM v3.0 (InSync Software)
Best 16-Bit Application:
HyperCard IIgs (Apple Computer)
Best Apple II Utility:
ProSel-16 (Glen Bredon)
Outstanding Innovation:
Pointless (Westcode Software)
Multimedia Achievement:
HyperStudio 3.0
Outstanding Developer Aid:
GSBug v1.6 (Apple/Dave Lyons)
Best Apple II Publication:
II Sysops
Best Online Service (TIE):
America Online and GEnie
Software Of The Year:
GS System Software 6.0 (Apple)
Individual Recognition:
Alan Bird (Beagle Bros) and Tom Weisharr (Resource Central)
Individual Achievement Award:
Andy Nicholas
Group Achievement Award:
System Software Development Team (System 6.0)

Okay, you caught us. *II Sysops* didn't really win the award fpr Best Apple II Publication. The award really went to *A2-Central*. It was a tough loss for us to take, but we'll learn to live with it. Congrats to *A2-Central* and all of the other award winners.

The controversy concerned the criteria for a product to be eligible for an award. Many people were upset that products that either were not released or only saw minor revisions in 1991 were nominated. System 6.0, for example, wasn't released until late March, 1992. An attempt was made on GEnie to organize the "People's Choice" awards, but voters were given the same instructions for determining whether or not a product was eligible. For the most part, the People's Choice awards went to the same products and people who won the Achievement Awards.

Laser Computer may be in trouble.

A letter mailed to dealers from CFC Technology Services in April indicates that Laser may be having internal problems. According to the letter, Laser recently asked CFC to become the official distributor of the entire Laser Computer line. The letter, written by CFC Dealer Representative Linda Cocalis, says: "[CFC is] trying to determine whether to continue its relationship with Laser. ... I am sure you are as frustrated as we are when it comes to getting product from Laser. ... with Laser's track record relative to abrupt discontinuance of product lines and on and off product decisions, we are very reluctant to [become their distributor]." The letter goes on to ask dealers to fill out a survey about their feeling toward Laser Computer. Laser Computer manufactures the popular Laser 128 line of Apple II compatible computers, as well as a number of IBM compatibles and other electronic products.

If you have news of interest to *II Sysops* readers, send information about it to us by email at root@pro-iisysops.cts.com, or to

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We're interested in articles about new products or updated products, Apple II organizations, sysop groups, Apple II or sysop events, legal issues concerning sysops (telephone rates, BBS seizures, new regulations, etc.), and other news.

GNO Way!

Tim Meekins and Jawaid Bazyar have done the "impossible" with GNO/ME, the multitasking environment for the Apple IIgs. Among other things, GNO makes it possible to run a multiline BBS on a single IIgs.

GNO/ME, a multitasking environment for the Apple IIgs computer, was written by Jawaid Bazyar and Tim Meekins. I recently had the opportunity to interview Jawaid about GNO and it's possibilities in respect to telecommunications. First, a little background info about both Jawaid and Tim (as written by Jawaid).

Jawaid Bazyar was born in Denver, Colorado, the son of a poor sharecropper. Jawaid followed his love of computers to the Apple IIgs, programmed for Macs and PC's for a while, then went to college. Last spring he graduated from the University of Illinois and Urbana/Champaign with a degree in Computer Engineering. This means he can program and hack on hardware with equal ease (keep an eye out for future Procyon hardware projects). Jawaid's favorite fields are operating systems, compiler technology, and machine intelligence. He's written a Life simulator, a telecommunications program, a bad disk block utility, an interpreter for the Scheme language (a modern version of Lisp), a BBS, and a shareware modem control tool set.

Tim Meekins was also born the son of a poor sharecropper (not the same one). His first computer was an Apple II+. He's currently enrolled (and due to graduate) from Ohio State University's Masters program in Computer Science. Tim's favorite computer recreations are 3D graphics and applying advanced computer science techniques to the IIgs. Tim wrote the Z-3D demo, ZLaunch, worked for a company doing outline font processing and CAD/CAM software, a 3200 color mode quantizer for super GIF conversions (coming soon), the best Amiga MOD player for the IIgs (also coming soon), and co-wrote two Internet Relay Chat demo disks.

With that taken care of, here's the meat of the interview, in Q&A format:

II Sysops: For starters, could you tell our readers what GNO is?

Jawaid Bazyar: GNO is a multitasking system whose design is based on Unix. Unix is a powerful operating system that has permeated the computer industry; you'll find it used in schools, government, business, and even on Army tanks. Unix was originally designed as a small, efficient OS capable of utilizing a machine's resources to the utmost; it has done this and more.

GNO is implemented as an application which extends the way GS/OS and the ToolBox work. It provides new programming calls through the ToolBox, and effectively rewrites many GS/OS calls to allow them to work with many programs at once.

GNO is a pun on GNU, a recursive acronym ("GNU's Not Unix"). GNO was originally intended solely as a development environment (it has quickly grown far out of that), and Tim made a joke at our first Programming Party based on our perceived competition (the only other maker of shell-based development systems for the IIgs). Thus, GNO was originally GNO's Not Orca(tm). However, we no longer officially claim any meaning for GNO. (Users have been quick to find replacements, such as "Great New OS" or "GNO's a Nice Olternative" (misspelling intentional). We finally decided on GNO/ME (GNO Multitasking Environment), simply because it looks cool and can be pronounced either "nome" or "No-M.E." (a nice, authoritative sounding term :-)

Most Unix type systems cost at least $100, and are often several thousand dollars. GNO only costs $80 (+ $3 s&h US, $5 international). We accomplished this by only selling direct to the user. You can order GNO from Procyon, Inc., [whose address appears on the back page]. We accept checks and MasterCard/Visa. GNO comes with the kernel and shell, about 40 utilities WITH C SOURCE CODE, and an on-line documentation system.

IIS: Why is GNO not sold through mail order companies?

JB: The minor answer to that is that mail order houses take a big chunk of a developer's income. The major answer is that it allows us to maintain direct contact with our customers. When they have a problem or question, they know exactly where to go and who to talk to. Customer support is very important to us, and we pledge to maintain the highest possible level of support by helping to keep the users informed of our progress. Selling direct also allows us to know who all of our users are. This way when we have a new update or new product, the users will always know directly.

IIS: How do we use GNO? Could we, for example, be receiving a file with ProTERM and working in AppleWorks GS at the same time?

JB: The concept is valid, but the implementation is a little

different. GNO cannot run ProDOS 8 software, due to the fact that P8 and GS/OS want the same memory; thus, they cannot coexist without special virtual memory hardware which the IIgs does not have.

However, we're in the process of porting the Unix rz/sz package. rs/sz is a set of programs that implement the full range of XModem, YModem, and ZModem protocols, including Zmodem's RLE compression feature. To answer your question, you could indeed use AppleWorks GS and one of these programs simultaneously.

Also, I just released a 16-bit text mode terminal program, that provides all the basics (vt100, vt52, and Proterm Special emulation, X/YModem, scrollback). The program is called TelCom/GS, is freeware, and works great with GNO.

IIS: What are some of the capabilities of GNO?

JB: GNO provides core multitasking functionality. The kernel implements what's called pre-emptive multitasking. The kernel keeps a list of currently executing programs. Pre-emptive means that the operating system periodically stops an executing program and gives control to the next program in the list. This has several benefits over the Macintosh- style "cooperative" multitasking; the most obvious is that programs do not have to be specially written to multitask well. Another is that you can control the priority of programs, to give certain ones more CPU time or less CPU time, as you desire. If any of you have ever used MultiFinder on a Mac and come across an unfriendly program that takes all the CPU time and makes MultiFinder useless, you can probably see the benefit of the preemptive method.

GNO provides interprocess communications features such as Unix signals and pipes. Pipes look and act just like files, but actually reside in memory. Two programs can,set up the pipe, and use this to communicate; one program reads from the pipe, the other writes. As an example of the uses of pipes, a BBS user-to-user 'chat' feature can be written almost trivially with pipes.

Signals are sort of like interrupts; when a program receives a signal, it can execute a special handler. One of the standard signals is 'kill'; this signal will cause a program to terminate (unless the program has a handler for it installed). Signals provide the basis of one of GNO's most powerful features, job control. With job control you can suspend an executing program, restart suspended programs either in the foreground or in the background, and kill executing programs. For programmers, this is a great boon; never again will you have to reboot because a program is caught in an infinite loop.

GNO is completely compatible with System Software 6.0. It's also fully compatible with The Byte Works ORCA(tm) development languages and utilities. You can, for instance, start a program compiling in the background, and go back to editing the source code.

GNO is also highly compatible with Unix source code; many of the utilites provided with GNO (almost 40 of them) are direct ports of Unix programs. This was achieved by implementing more than 30 of the most common Unix system calls and library functions.

Much of the true power and ability of GNO will come out through applications that are written to support it. GNO is gathering some of the best creative talent in the IIgs world. This combined with the fact that GNO can use much Unix source code directly means that the IIgs is in for quite a ride. As new, incredibly powerful applications for GNO are released, people will begin to see the inherent flexibility and power of the IIgs.

IIS: What gave you and Tim Meekins the idea to develop GNO?

JB: Basically, we got tired of people telling us it couldn't be done. When someone says to me that a thing is impossible, I listen to exactly why it can't be done. Then I do it.

All through college Tim and I grew to know Unix, and how powerful it was. We knew that such a system on the IIgs would give it a lot of new capabilities. Through those years (1988-1991) several failed attempts to deliver multitasking on a IIgs were made. These include LeapFrog. While LeapFrog was a good attempt, it didn't allow for such things as text-based programs. As any programmer or anyone used to Unix will tell you, a good command-line interface is much more useful than mouse-and-windows.

Bill Gulstad (the author of LeapFrog) and I then made a short-lived attempt to port the Minix operating system to the IIgs. We ran into problems with the massive amount of dependence Minix had on certain IBM PC features. So, we abandoned that project and for almost a year only brooded on how to go about implementing the system.

In the spring of 1991, I once again became frustrated with the lack of multitasking and set out to develop a system from scratch. This attempt was successful, and resulted in GNO/ME. As with many other multitasking OS's, my first test consisted of two multitasking programs that counted numbers on the screen. Not very useful, but impressive, especially to those who said we were doing an impossible thing.

Tim lived in Ohio (I in Illinois) and he heard about the project over the Internet. He became interested, and when we finally met at Procyon's first "Programming Party", he began work on the shell. The rest, as they say, is history, with our introduction of the product at last year's KansasFest.

IIS: With GNO, isn't it theoretically possible to run a multiline BBS on a IIgs?

JB: Indeed, this is one of the most feasible applications (and the second most often requested; the most often

being MultiFinder). We are not writing such a BBS, but others are, and we hope that by the end of the summer at least one of these will be done.

GNO provides built-in support for communications programs. It comes with high-speed serial drivers for the built-in ports. Using these drivers is as easy as pie; simply open the driver as you would a file, and use the same read/write calls as you would with any disk file. The drivers can be fully controlled with the ioctl() system call; this provides functions such as setting the baud rate, parity, flow control options, and other useful things like "how many bytes are waiting in the buffer?".

Another boon to BBS authors is the soon-to-be-available 'termcap' library. termcap is the standard Unix method of writing a program to be compatible with **any** terminal type. A program simply reads the capability it wants (say "clear screen" or "move cursor") from the database and then prints the control codes that are returned.

IIS: Obviously there would be some obstacles to overcome. The BBS program would have to be written with multitasking in mind, right? For example, two copies of a BBS program are running, one answering "line 1" and the other answering "line 2". Both are started simutaneously. Each one reads from a disk file that the last caller was caller 200. A person logs on to line 1, and is caller 201. While he is still online, another person logs on to line 2, which still believes the last caller was caller 200. The person on line 2 is also considered caller 201. This type of problem can probably be fairly easily overcome with appropriate changes in the software. But wouldn't there also be some hardware problems to overcome as well?

JB: Actually, there aren't any hardware problems (other than general serial receive; see below). The problem you describe is one of the most studied problems in all of computer science, and in fact has dozens of good solutions. The most common is to employ what's called a semaphore; GNO provides built-in routines to allocate and use semaphores, so that cooperating programs (like a multiline BBS) can be prevented from making errors like the one you describe.

Since GNO and it's serial drivers are AppleTalk compatible, a sysop could set up a BBS system with several IIgs' linked to a Macintosh file server (with the upcoming Apple EtherTalk card, this will be great!).

IIS: What about interupts?

JB: Interrupts work as always. Since GNO's drivers use the GS's firmware (one very impressive piece of engineering!) the BBS programmer doesn't have to worry one whit about interrupts in his code. We used a little-known trick to access the firmware quickly, which allows us 9600 baud (19200 on an accelerated GS) with no data loss, unlike the two built-in serial ports which can lose data whenever disk access occurs.

IIS: What about slots? The GS has just two serial ports (one intended for a printer). And most GS owners would be reluctant to give up multiple slots for multiple serial cards. Is the special serial card you are working on expected to be available soon?

JB: We're not sure when development of the card will be done, but keep an eye out for it. The card will be ROMless, which means it can go into any slot without affecting the built-in purpose of that slot (for instance, you could put it in slot 1 without affecting the use of your IIgs's printer port). The card will come with (optionally) 4 serial ports installed, so it will make very good use of available slots. It will use the same IIgs/Mac connectors you're familiar with; and it uses the same SCC8530 chip the IIgs has.

The biggest benefit of the card is that it will have it's own on-board 65816 CPU, buffers, and DMA capability to handle serial I/O. This means that even with several users on a machine at high speed, no data will ever be lost.

IIS: Thank you, Jawaid, and please keep us up to date on the progress of the serial card and BBS software!

Reader Mail

Dear *II Sysops*,

I've been using a IIe and Steve Russ' Let's Talk BBS software since 1985. To this day it has served well. I guess the firm went belly-up and disappeared. Too bad, as some improvements could have been made to an already fine system.

Do you have any articles or information on Russ and/or Let's Talk?

Joseph Nelson
Forestport, NY

Unfortunately, we've never heard of Let's Talk. One of the things I've realized over and over again since we started this newsletter, though, is that there is a lot more BBS-related software out there for the II than many of us realize; certainly more than I ever expected. Perhaps one of our readers can shed more light on Let's Talk. Anyone?

Dear *II Sysops*,

The Alliance, as you have probably heard, was formed to promote the Apple II and to support Apple II users. One of the most widespread complaints that I have heard is the lack of software or upgrade/bug fixes to existing software. We have sent a letter to every Apple II developer we could find to encourage them to not only stay with the Apple II but also to develop new software and issue upgrades and bug fixes to their existing software. Because these companies have been supporting the Apple II for a long time, and we appreciate it, we are giving them a head start of about two or three months. After that time, we will begin to pester Mac software houses to port their programs to the Apple IIgs. We will also encourage MS-DOS software houses to port their software either to the Apple IIgs, if their software is for Windows, or to the IIe, if it's command line. The Apple II developers know about our plans so it's not a secret.

We have already placed ads in national publications: National Review, CQ (for Amateur Radio operators), Sports Afield, Electronic Musician, Inc. Magazine, The Atlantic, Discover and Mother Jones. The ads are small but as we grow, so will the ads and the number of publications. We will not be advertising in Apple II magazines. We believe that such advertising is the responsibility of the developers and we have encouraged them to do so. Our ads in these wide circulation magazines will be aimed at two groups of people.

First, current Apple II users who don't belong to a user group or subscribe to Apple II publications. They are probably using their computer right as it came out of the box with software they bought at the same time. They don't know about the great advances like System 6. We shall provide them with information on what's available and encourage them to join a local user group and get up to date so they can get the most of their system, be it a IIe, IIc, IIgs or even a II+.

The second group are people who are planning on buying a computer. We shall also provide them with information on what software and hardware is available, where to buy an Apple II, and why the Apple II is a great computer. We hope to convince them that the Apple II is a better choice than an IBM PC clone. We shall also tell them about the great support they can get from their local user group.

What's next?

The mall. We are in the process of getting information for the "National Apple II Day at The Mall". We believe that this will greatly increase the visibility of the Apple II with the general public. In general, it would involve setting up Apple IIs and displaying and demoing the software and hardware available. We would like user groups to participate and to take charge of it locally. This would be another good way to get Apple II users "back into the fold" and to attract new members for your group. We would provide national attention by informing the national news media. You would inform your local news people and get even more attention.

The Video. We are also in the process of finalizing specifications for a video tape tentatively entitled "The Apple IIgs And You". This tape will show people who are afraid to open up the computer and insert peripheral cards how to do it and not to be afraid they'll "break it." It will also demo software and hardware to show people what is available, the power of the computer and how easy they are to use. We have not forgotten the IIe and IIc. If this tape is successful, we may also produce one for the IIe and IIc!

The Alliance now has well over 220 members. The majority are from the U.S. but we also have Canadian, European and even eight members who live in Singapore. Now that's "International"!

John R. Majka
Alliance International Inc.

II Sysops would like to hear from you! Published letters earn the writer one free issue of the newsletter. Send your letters to: *II Sysops*, P.O. Box 720, Eldersburg, MD 21784, or by email to root@pro-iisysops.cts.com. If you would like to write a full-length article (worth a full-year subscription!) please contact us about writing guidelines, formatting, etc. Comments, complaints, questions, tips for other readers, or anything else -- send them in!

We're looking for a few good writers!

Interested in writing an article for *II Sysops*? Interested in a free one-year subscription? If you'd be interested in writing about any of these topics (or any other topic), contact us and we'll give you info on how to write an article for us. We're looking for articles about the following:

- Product reviews (VM, Warp Six, AppleNet, LLUCE, more)
- How to run a customer service BBS for a business
- Legal issues a sysop needs to be aware of
- ISDN and what it means for the future of BBSing
- Are telephone companies trying to rip off modem users?
- Editorial articles

Also, if you'd being interested in **advertising** your product in *II Sysops*, contact us. Advertising rates are $50 for a full page, $25 for a half page, $12.50 for a quarter page, etc. You could even advertise your BBS if you wanted to. You provide us with a "camera-ready" or Publish It! copy of your ad, and we'll place it in the newsletter, guaranteed to reach at least 200 sysops. Flyer inserts are also possible.

Vendor List

Names and addresses of organizations mentioned in *II Sysops*.

Alliance International, Inc.
(AII)
P.O. Box 20756
Louisville, KY 40250

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InSync Software
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Jeff Garvas
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L&L Productions
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100 W. Pueblo, Suite 200
Reno, NV 89509
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Morgan Davis Group
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10079 Nuerto
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